Family Bramidae

Body oblong to ovate or rather short, more or less elevated and well compressed. Caudal peduncle compressed. Head moderate, compressed, rounded anteriorly. Snout obtuse, convex. Eye rounded, advanced in head. Mouth cleft moderate or short, well inclined. Premaxillaries protractile. Maxillary extends below eye, wide, scaly. Jaws with bands of slender teeth. Teeth present or absent on vomer and palatines. Preopercle serrate or spinous in young, entire or serrulate with age. Opercle well developed. Branchiostegals 7. Air bladder present or absent. Pyloric caeca

few. Vertebrae 16 + 23. Scales large or small, firmly adherent, cycloid, lobate or emarginate or with median ridge or spine; latter present in all young, sometimes disappearing with age. Soft dorsal and anal scaly, or with sheath of scales. Axillary ventral scale prominent. Dorsal and anal long, fins alike, each 3 or 4 front rays short and simple, developed as spines, remaining rays all articulated. Caudal lunate or forked, sometimes widely so. Pectoral long. Ventral small, below pectoral, with spine and 5 rays.

Pelagic fishes usually of large size, some living in deep water. Changes great with age. Genera few. The species are

difficult to assign and owing to their usual rarity in museums, imperfect descriptions and incomplete or inaccurate figures, not well known. The recent paper of Bigelow and Schroeder 1929 on Taractes princeps in the Northwestern Atlantic gives a good discussion of these nominal forms.

Analysis of Genera

a.¹ Lateral line more or less evident; soft dorsal and anal without anterior elevated falcate lobes.

Brama.

a.² No lateral line; soft dorsal and anal with anterior elevated falcate lobes.

Taractes.

Genus Brama Schneider

Brama Schneider, Syst. Ichth. Bloch, (1801), p. 98, (Type Sparus raii Bloch, designated by Jordan and Gilbert, Bull. U. S. Nat. Mus., No. 16, (1882) p. 915,)

Lepodus Rafinesque, Carat. Nuov. Anim. Sicilia, (1810), p. 52, (Type Lepodus saragus Rafinesque = Sparus raii Bloch, monotypic.)

Xylometopon (Van Beneden) Bleeker, Ned. Tijds. Dierk., vol. 4, (1873), p. 133, (Type Xylometopon dussumieri Bleeker, orthotypic.)

→Eumegistus Jordan and Jordan, Mem. Carnegie Mus., vol. 10, No. 1, December 1922, (p. 35,) (Type Eumegistus illustris Jordan and Jordan, monotypic.)

Amblyrhynchotes Bleeker, Arch. Néerl. Sci. Nat., vol. 11, 1876, p. 311, (Type Rhynchotes squamosus Hutton, orthotypic,)

Cat 29

Genres poiete Cuvier

(Genres poiete Cuvier, Règne Animal, ed. 2, vol. 2, 1829, p. 118 (on Renard, Poiss. Moluques Austral., 1718–19, pl. 11, fig. 1. Moluccas). 1/m Fowler, Proc. Acad. Nat. Sci. Philadelphia, 1927, p. 284 (Philippines); Mem. Bishop Mus., vol. 10, 1928, p. 225 (on Day).

(Genres poeti Bleeker, Naturk. Tijdschr. Nederl. Indie, vol. 2, 1851, p. 471 (Rio). 1/4

Cuvier, Hist. Nat. Poiss., vol. 6, 1830, p. 468 1/4

Günther, Cat. Fishes Brit. Mus., vol. 1, 1859, p. 341 (compiled); vol. 4, 1862, p. 256 (no locality). 1/m Kner, Reise Novara, Fische, 1865, p. 55, pl. 3, figs. 3a–b (air bladder and air vessel) (Java). 1/m Day, Fishes of India, pt. 1, 1875,

Proc. Zool. Soc. London, 1870, p. 698 (Andamans);

Collybus Snyder, Bull. U. S. Fish Comm., vol. 22, 1902 (1904), p. 525, (Type Collybus drachme Snyder, monotypic.)

Xystaema ~~opercularis~~ (not Forsbål) Fowler,
~~op. cit.~~, No. 58, June 18, 1918, p. 64 (Philippines).
Colleja

Depth 2 to 2 1/2; head 2 3/5 to 2 7/8, width 2 to 2 1/5. Snout 3 to 3 1/2 in head; eye 3 to 3 1/8, greater than snout, greater than interorbital in young to 1 1/5 with age; maxillary reaches 1/5 to 1/4 in eye, expansion 2 1/2 to 3, length 2 1/2 to 3 in head; interorbital 3 to 3 1/4, broadly convex. Gill rakers 5 or 6 + 7 or 8, short points, 1/2 gill filaments, which 1 7/8 in eye.

Scales 35 to 42 in lateral line to caudal base and 3 or 4 more on latter; 6 or 7 above, 9 to 11 below, 20 to 21 predorsal forward opposite front eye edge with premaxillary groove broadly scaleless; 3 rows on cheek to preopercle ridge. Scales with 4 to 6 basal radiating striae; circuli very fine.

D. IX, 10, I, second spine 1 1/10 to 1 1/3

Body deeply ovoid, longer with age. Head rather small. Snout very short. Eye rounded. Mouth rather small, lower jaw protruded. Outer series of teeth in jaws more or less enlarged. Vomerine and palatine teeth obscure or obsolete with age. Lower gill rakers 12, inner edges spinulose. Air bladder large. Pyloric caeca 4. Scales small, smooth with age. Muzzle naked, rest of head scaled. Lateral line obsolete. Dorsal and anal moderately elevated anteriorly.

Evidently a single species in the eastern Atlantic, the Mediterranean, South Africa to Japan, New Zealand and Hawaii.

Brama raii (Bloch)

Sparus raii Bloch, Naturges. Ausland. Fische, vol. 5, pt. 8, (1791), p. 95, pl. 273, (type locality, North Sea) (on Brama marina Ray, Synopsis methodica, Pisc., 1713, p. 115, type locality, Middelburg).

Brama raii Schneider, Syst. Icht. Bloch, 1801, p. 99,

— Lunel, Mém. Soc. Phys. Hist. Nat. Genève, vol. 18, p. 170, pl. 1, 1866. (compiled).

— Lütken, Spolia Atlantica, p. 491, pl. 4, figs. 1–2, 1880 (Atlantic)
(young)

premaxillary groove broadly naked.

D. IX, 10, I, second spine 1 3/4 in head, first ray 3; A. III, 7, I, third spine 2 3/4, first ray 2 7/8; least depth of caudal peduncle 2 4/5; ventral 1 4/5; caudal 2 1/2 in combined head and body to caudal base; pectoral 2 3/4.

Silvery, upper parts tinged yellow. Each scale above lateral line with obscure darker central spot forming longitudinal bars following contour of back; below lateral line series of much larger oblong brick red spots. Naked parts of head pale olive or grayish green. Fins dorsal spines and all rays except last with narrow oblique blackish basal spot; caudal edged and tipped dusky. Blackish spot in pectoral axil. Length 145 to 222 mm.

(Ogilby.)

Queensland.

— Barnard, Ann. South African Mus., vol. 21, pt. 2, p. 594, pl. 24, fig. 2, October 1927 (Table Bay; Agulhas Bank).

— Fowler, Mem. Bishop Mus., vol. 10, 1928, p. 137 (compiled). — McCulloch, Austral. Mus. Mem., No. 5, pt. 2, p. 194, Sep. 10, 1929 (reference).

66081 U.S.N.M. Suva, Fiji.
Albatross Collection (09047). Length
40 to 73 mm. 24 examples.

66082 U.S.N.M. Truk, Carolines.
Albatross Collection (09053). Length
31 to 45 mm. 7 examples.

52999 A.N.S.P. Durban Bay, Natal. 1927.
H.W. Bell Marley. Length 205 mm.

53113 and 53114 A.N.S.P. Delagoa Bay, Portuguese
East Africa. July 1923. H.W. Bell Marley. Length
136 to 152 mm.

31730 and 31731 A.N.S.P. Japan. Stanford
University. Length 140 to 165 mm.

Sparus brama Bonnaterre, Tabl. Dchth., p. 104, pl. 50, fig. 192, 1788 (type locality; Seas of England (on Pennant). — Bloch, Naturg. Ausland. Fische, vol. 5, p. 72, pl. 269, 1791 (Cape of Good Hope). — Walbaum, Artedi Pisc., vol. 3, p. 290, 1792 (on Bloch). — Lacépède, Hist. Nat. Poiss., vol. 4, pp. 37, 115, 1802 (Cape of Good Hope).

Sparus castaneola Lacépède, Hist. Nat. Poiss., vol. 4, pp. 32, 111, 1802 (type locality, Atlantic).

Sparus canteola Shaw, General Zoology, vol. 4, p. 404, 1803 (copied Bloch).

Sparus niger Turton, British Fauna, p. 98, 1807 (type locality, Swansea).

Lepodus saragus Rafinesque, Carat. Nuov. Animal. Sicilia, p. 53, 1810 (type locality, Palermo).

Brama dussumieri Cuvier, Hist. Nat. Poiss., vol. 7, p. 294, 1831 (type locality, From a large albicore near the Equator in 85° E. of Paris, Indian Ocean). — Günther, Cat. Fish. Brit. Mus., vol. 2, p. 409, 1860 (China Sea). — Lunel, Mém. Soc. Phys. Hist. Nat. Genève, vol. 18, p. 179, 1866 (copied).

Brama orcini ~~Valenciennes~~ Cuvier, Hist. Nat. Poiss., vol. 7, (1831) p. 295, (type locality, from a large albicore near the Equator in 85° E. of Paris, Indian Ocean) — Günther, Cat. Fish. Brit. Mus., vol. 2, (1860) p. 409, (N. lat. 1° W. long. 19°, from dolphin). — Lunel, Mém. Soc. Phys. Hist. Nat. Genève, vol. 18, p. 180, 1866 (copied).

Taractes orcini Günther, Journ. Mus. Godeffroy, vol. 5, pt. 11, (1876) p. 148, (South Sea). — Fowler, Mem. Bishop Mus., vol. 10, (1928) p. 138, (compiled).

Cat 29 Genus baconensis (Evermann and Seale)

Xystaema baconensis Evermann and Seale,
Bull. Bur. Fish., vol. 26, 1906 (1907),
p. 69, fig. 8. Bacon and Jolo, Philippines.
~~Waldo Creek, Ka. 58, Jolo, 1, 1918, p. 64~~
~~Philippines.~~

depth 2 2/5 to 2 1/2; head 3 1/8 to 3 1/3, width
1 7/8 to 2. Snout 3 1/8 to 3 1/5 in head; eye
3 1/3 to 3 2/3, greater than snout to subequal
with age, 1 1/8 to 1 1/4 in interorbital;
maxillary reaches opposite front pupil
edge, expansion 2 1/3 to 2 2/3 in eye, length
2 1/2 to 2 3/5 in head; teeth villiform,
in narrow bands in jaws; interorbital
2 3/5 to 2 7/8, very slightly convex with
median depression; groove sealed,
leaves only small median naked circular
area, usually less than half of pupil
in diameter; Gill rakers 5 + 6, short
points, 1/2 of gill filaments, which 1/2

Brama australis Valenciennes, Règne Animal, Cuvier, Poiss., ed. ill., pl. 44, fig. 1, 1839 (type locality, Valparaiso, Chili).

Brama chilensis Guichenot, Hist. Chile, Gay, Zool., p. 218, 1843 (type locality, Valparaiso). — Limel, Mém. Soc. Phys. Hist. Nat. Genève, vol. 18, p. 179, 1865 (note).

Cover 29

Pseudupeneus tpilurus (Bleeker)

Upeneus tpilurus Bleeker, Naturkund. Tijdschr. Nederland. Indië, vol. 6, 1854, p. 395. Nagasaki; Verhandel. Batavia. Genootsch. (Japan), vol. 26, 1854, p. 68, pl. 2, fig. 2 (Nagasaki); Act. Soc. Sci. Ind. Neerland., no. 3, vol. 3, 1857–58, p. 5 (Japan). 1/m Günther, Cat. Fishes Brit. Mus., vol. 1, 1859, p. 406 (compiled). 1/m Schmeltz, Cat. Mus. Godeffroy, no. 4, 1869, p. 14 (Kandavu). 1/m Klunzinger, Verhandel. zool. botan. Gesellsch. Wien, vol. 20, 1870, p. 747 (Kosseir, Red Sea). 1/m Schmeltz, Cat. Mus. Godeffroy, no. 5, 1874, p. 23 (Viti Islands). 1/m Martens, Preuss. Exped. Ost Asien, 1876, p. 387 (Yokohama). 1/m Jordan and Snyder, Annotat. Zool. Japon., vol. 3, 1901, p. 84 (Nagasaki). 1/m Tanaka, Fishes of Japan, vol. 23, 1916, p. 405, pl. 110, fig. 332 (Japan). 1/m Herre and

Brama agassizi Poey, Mem. Hist. Nat. Cuba, vol. 2, p. 204, 1861 (type locality, Cuba). — Lunel, Mém. Soc. Phys. Hist. Nat. Genève, vol. 18, p. 182, 1866 (copied).

Brama brevoorti Poey, Mem. Hist. Nat. Cuba, vol. 2, p. 206, 1861 (type locality, Cuba). — Lunel, Mém. Soc. Phys. Hist. Nat. Genève, vol. 18, p. 184, 1866 (copied).

Taractes squamosus Hutton, Ann. Mag. Nat. Hist., ser. 4, vol. 16, p. 313, 1875 (type locality, Cook Straits, New Zealand). — Fowler and Bean, Bull. U. S. Nat. Mus., No. 100, vol. 8, p. 34, 1929 (copied).

Brama japonica Hilgendorf, Sitzg.
Ber. naturf. Freunde Berlin, (1878)
p. 5 (type locality, Japanese seas).
— Lütken, Vidensk. Selsk. Skrift.
Kjöbenhavn, ser. 5, vol. 12, (1880) p.
494 (reference). — Goode and
Bean, Oceanic Ichth., (1895) p. 211
(reference). — Jordan and Snyder,
Annot. Zool. Japon., vol. 3, (1901), p.
69 (reference). — Jordan, Tanaka,
Snyder, Journ. College Sci. Tokio,
vol. 33, (1913) p. 134, (reference).

Genres (Xystaema) macrorama Steindachner, Sitz. Ber. Akad. Wiss. Wien, math.-naturw. Klasse, vol. 115, abth. 1, 1906, p. 1381 (Lepolu).

depth 2 2/3; head 3 1/3, width 2 1/8. Snout 3 1/3 in head; eye 3 2/5, greater than snout, 1 1/8 in interorbital; maxillary reaches 1/5 in eye, length 2 1/2 in head; teeth fine, in moderate bands in jaws; interorbital 3 1/10, broadly convex. Gill rakers 6 + 7, lanceolate, 2/5 of gill filaments, which 1/2 of eye; upper 4 rudimentary.

Scales 43 in lateral line to caudal base and 6 more on latter; 6 above, 12 below, 27 predorsal forward opposite front of eye leaving broad, naked, median triangular area with apex not quite reaching opposite front pupil edge. Scales with 1 or 2 basal

Collybus drachme Snyder, Bull. U. S. Fish Comm., vol. 22, (1902 (1904)), p. 525, pl. 9, fig. 6, (type locality, off Niihau; Honolulu). — Jordan and Evermann, Bull. U. S. Fish Comm., vol. 23, pt. 1, p. 203, 1903 (1905), ~~p. 203~~ (Honolulu). — Jordan and Snyder, Bull. Bur. Fisher., vol. 26, 1906 (1907), p. 211, (Honolulu). — Jordan and Jordan, Mem. Carnegie Mus., vol. 10, no. 1, (December 1922), p. 35, (Honolulu). — Fowler, Mem. Bishop Mus., vol. 10, (1928), p. 138, (Honolulu; type).

p. 100, pl. 26, fig. 1. 1/m Macleay, Proc. Linn. Soc. New South Wales, vol. 8, 1883, p. 261 (River on Milne Bay, New Guinea). 1/m Day, Fauna British India, vol. 1, 1889, p. 538. 1/m Sauvage, Hist. N. Madagascar, Poiss., 1891, p. 240. 1/m Pellegrin, Bull. Soc. Zool. France, vol. 39, 1914, p. 225 (Fort Dauphin, Madagascar).

Gerres poeti Bleeker, Verhandel. Batav. Genootsch. (Natuurk. Verh. Nederl. Bengal.), vol. 25, 1853, p. 38.

Diapterus poeti Bleeker, Atlas Ichth. Ind. Neêrland., vol. 8, 1876-77, p. 128 (Bintang, Banka, Java, Madura, Amboina, Saparua).

Diapterus poeti Bleeker, Atlas Ichth. Ind. Neêrland., op. cit., pl. 377, fig. 1.

Xystaema poeti Fowler, Copeia, no. 58, June 18, 1918, p. 64 (Philippines).

Xystaema kapas (not Bleeker) Fowler, Copeia op. cit., no. 58, June 18, 1918, p. 64 (Philippines).

Eumegistus illustris Jordan and Jordan, Mem. Carnegie Mus., vol. 10, no. 1, (december 1922) p. 36, pl. 2, fig. 1, (type locality, Honolulu). —
Jordan, Evermann, Tanaka, Proc. California Acad. Sci., ser. 4, vol. 16, no. 2, (1927) p. 654, (Honolulu).

Card 29

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Gerres macrosoma Bleeker

Gerres macrosoma Bleeker, Naturk. Tijdschr. Nederl. Indië, vol. 6, 1854, p. 56. Pandangole, Halmaheira. 1/2

Günther, Cat. Fishes Brit. Mus., vol. 1, 1859, p. 353 (Amboyna); vol. 4, 1862, p. 263 (Amboyna). 1/2 Martens, Preuss. Exped. Ost Asien, 1876, p. 387 (Batavia). 1/2 Karoli, Termesz. Füzetek, Budapest, vol. 5, 1881, p. 155 (Singapore). 1/2 Beaufort, Bijdr. Dierk., Amsterdam, vol. 19, 1913, p. 121 (Naoneb, Waigiu). 1/2 Fowler, Proc. Acad. Nat. Sc., Philadelphia, 1923, p. 41 (Madagascar); Mem. Bishop Mus., vol. 10, 1928, p. 234 (Eban Island). —J. Schmidt, Trans. Pac. Comm. Acad. Sci. USSR., vol. 1, 1930, p. 53 (Gayama, Riu Kiu).

Diapterus macrosoma Bleeker, Atlas Ichth. Ned. Indië, vol. 8, 1873-77, p. 126, pl. (78) 304, fig. 5 (Singapore, Java, Bali, Timor, Ternate, Halmaheira, Obi major, Amboina, Saparua, Waigiu).

Depth 1 2/3 to 2 1/8; head 2 4/5 to 4 1/8, 5 1/5 width 1 1/2 to 2 3/10. Snout 3 2/3 to 3 4/5 in head from snout tip; eye 2 3/5 to 4, equals snout in young, greater with age, equals interorbital. maxillary reaches 1/3 to 3/5 in eye, expansion 2 to 2 3/4 in eye, length 1 9/10 to 2 in head from snout tip; interorbital 2 3/4 to 3 1/2, greatly elevated convexly. Gill rakers 5+12, finely lanceolate, 1/3 in eye; gill filaments 4/5 of gill rakers.

Scales 45 76 to 90 in lateral line to caudal base; 11 to 14 above, 16 2 to 23 below; 5 rows transversely on maxillary; 22 predorsal; 17 rows on cheek to preopercle edge. Head closely scaled, also vertical fins.

D. III, 8 2 29 to or 33, first branched ray 1 1/5 to 1 4/5 in total head; A. II, 2 5 or to 28, first branched ray 1 2/3 to 2 3/4;

caudal greatly forked, $2\frac{4}{5}$ to $3\frac{3}{4}$ (left than head in young) in rest of fish; least depth of caudal peduncle $3\frac{3}{4}$ to 4 in total head length; pectoral $2\frac{3}{4}$ to 3 in head from snout to ef. rays $\frac{7}{8}$, 17; ventral $\frac{9}{8}$ I, 5 fin $2\frac{1}{8}$ in head from snout to ef. Brownish, with silvery or metallic white sheen. Snout, vertical fins and region above vent, with dusky. Pectoral axil jet black inside. Pectoral and ventral yellowish. Iris white. In young fins all pale.

South Africa, ~~Mauritius~~,
Indian Ocean, China Sea, Japan,
New South Wales, Victoria, Lord
Howe Island, New Zealand,
Hawii, Chili. Also in the
Atlantic, Mediterranean and
Caribbean Seas. Said to reach
700 mm in length.

Eumegistus illustris Jordan and Jordan, was based on a mutilated example 610 mm long, evidently an advanced or old stage in which the scales were said to be "smooth, entirely without vertical ridge, or emargination." It was also said to be "lustrous brownish black; the edge of dorsal and anal black above the paler scales; posterior edge of caudal abruptly white; outer edges of pectorals and ventrals also white."

3150. D. 5450. East Point N. 36° E., 9.2 miles (lat. 13° 23' 15" N., long. 124° 00' 30" E.), Batan Islands, east coast of Luzon. June 4, 1909. In 408 fathoms. Length 58 mm.

2186. D. 5329. Font Island (W.), N. 28° E., 24.25 miles (lat. 18° 33' N., long. 121° 37' 30" E.), off northern Luzon. In 212 fathoms. November 19, 1908. Length 79 mm.

U. S. N. M., No. 50875. Off Niihau. Albatross Collection (4176). Length 84 mm. Type of Collybus drachme.

U. S. N. M., No. 92803. Lat. 16° 54' 00" N., long. 63° 12' 00". Albatross Collection (2751). November 28, 1886. Length 49 mm.

Genus Taractes Lowe

Taractes Lowe, Proc. Zool. Soc. London, vol. 11, (1843) p. 82, (Type Taractes asper Lowe, monotypic.)

Argo (not Bohadsch 1761) (Döderlein) Steindachner and Doderlein, Denks. Akad. Wiss. Wien, math.-naturw. Kl., vol. 47, pt. 1, (1883) p. 242, (Type Argo steindachneri (Döderlein) Steindachner and Döderlein, monotypic. (Name only.)

of eye.

Scales 40 or 41 in lateral line to caudal base and 3 or 4 more on latter; 5 above, 9 or 10 below, 24 to 27 predorsal forward until nearly above nostrils, premaxillary groove completely sealed, 4 rows on cheeks to preopercle ridge. Scales with 5 to 8 basal radiating striae, sometimes with many as 6 incomplete auxiliaries; circuli very fine.

D. IX, 10, I, second spine 1 1/4 to 1 1/2 in head, first ray 2 1/3 to 3 1/3; A. III, 6, I, third spine 2 3/4 to 2 7/8, first ray 2 1/2 to 2 7/3; least depth of caudal peduncle 2 3/5 to 2 4/5; ventral 1 2/5 to 1 2/3; caudal 3 to 3 1/5 in combined head and body to caudal base; pectoral 3 1/8 to 3 1/4.

Back brown, with bright lilac and silvery reflections. Lower sides and under surface silvery white.

Body elongately ovate, back somewhat high, compressed. Head moderate, deep. Snout short, ~~deep~~ obtuse. Eye advanced in head, mouth short, mandible well protruding. Maxillary large. Teeth small, conic in jaws, on palate where variously obsolete with age. Scales large, 40 to 50 in median lateral series, firm, deeply emarginate, each with horizontal median ridge or spine. Scales on fins close set in young, largely confined to anterior lobes with advanced age. No lateral line. Dorsal falcate, lobe long as head length; slender spines few, adnate to soft rays. Anal falcate, base $\frac{2}{5}$ of fish without caudal. Caudal rounded in young, lunate with age. Pectoral

long as head. Ventral inserted slightly before pectoral, half size of same fin.

Species few, though probably all closely related or even to be referred to a single wide ranging one.

Analysis of Species

a.' Caudal deeply lunate. longipinnis.

a.² Caudal double concave, median rays long as marginal. saussurii.

Leaded
Follow—Ind Cape 134789

Pentapodus hellmuthii (Bleeker)

Heterognathodon hellmuthii BLEEKER, Nat. Tijds. Nederland. Indië, vol. 5, 1853, p. 75, (Lawajong, Solor). - GÜNTHER, Cat. Fish. Brit. Mus., vol. 1, 1859, p. 364 (compiled).

Pentapus hellmuthi BLEEKER, Atlas Ichth. Ind. Néerland., vol. 8, 1876-1877, p. 102, pl. (67)345, fig. 1, (Banka, Solor).

Pentapus hellmuthii FOWLER, Mem. Bishop Mus., vol. 10, 1928, p. 218 (copied BLEEKER).

Depth $3^{2}/_{3}$; head $3^{2}/_{5}$ to $3^{4}/_{5}$. Snout $3^{2}/_{5}$ in head; eye $3^{3}/_{4}$, $1^{1}/_{10}$ in snout, little greater to equal to interorbital; maxillary reaches $^{3}/_{4}$ to eye; expansion $2^{1}/_{2}$ in eye, length $3^{1}/_{4}$ in head; 2 or 3 small curved upper front canines; interorbital low; preopercle edge entire; suborbital depth $2^{1}/_{4}$ in eye.

Scales 50 in lateral line, 3 above, 15 below, 7 rows on cheek of which 3 on preopercle flange, predorsal scales extend forward till opposite eye center.

D. X, 9 or 10, fourth spine $2^{1}/_{4}$ in head, seventh ray $1^{3}/_{4}$; A. III, 7 or 8, third spine $2^{4}/_{5}$, first ray $2^{2}/_{5}$; caudal $1^{1}/_{8}$, emarginate, lobes pointed; least depth of caudal peduncle $2^{3}/_{4}$; pectoral $1^{1}/_{5}$; ventral 1, first ray ends in short filament.

Brown or rosy above, below rosy or silvery. Iris yellow or rosy. Broad median lateral band from snout tip through eye to caudal base, above brownish and below golden. edged narrowly pale both above and below. Blue dots along lateral line. ~~Spinous dorsal~~ margined golden. Length 148 mm. (Bleeker).

East Indies.

Taractes longipinnis (Lowe)

Brama longipinnis Lowe, Proc. Zool. Soc. London, vol. 11, (1843), p. 82, (type locality, Madeira). — Günther, Cat. Fish. Brit. Mus., vol. 2, ~~1860~~, 1860 p. 410, (copied). — Smitt, Scandinavian Fishes, pt. 1, p. 80, fig. 24, 1892 (Norway; Iceland). — Lunel, Mém. Soc. Phys. Hist. Nat. Genève, vol. 18, p. 180, 1866 (copied).

Taractes longipinnis Barnard, Ann. South Afric. Mus., vol. 21, pt. 2, p. 595, October 1927 (Simonstown, False Bay, 1876).

depth 3 1/8 in total with caudal; head 4. Eye 3, greater than snout, equals interorbital. Maxillary reaches 1/3 in eye. Scales 35 in lateral line, 4 above, 10 below. D. IX, 10, spines not very strong, second and third subequal, third equals head behind middle of eye. A. III, 7, second spines strongest, slightly shorter than third. Caudal deeply forked. Pectoral equals head, reaches above anal spines. Ventrals reaches 3/4 to anal. Silvery. Dark margin to dorsal and anal and spot on each spine and ray of dorsal about middle. Reaches 125 mm. (Clay.)

According to Clay who described the type in Paris as 113 mm. long it much resembles Gerres lucidus but is ~~with~~out the dark blotch on the dorsal fin. To the above may be

Taractes asper Lowe, Proc. Zool. Soc. London, vol. 11, (1843) p. 83, (type locality, Madeira). — Günther, Cat. Fish. Brit. Mus., vol. 2, 1860, p. 410, (copied). — Hilgendorf, Archiv Naturges., (1888) p. 208, (Azores).

→ Brama princeps Johnson, Proc. Zool. Soc. London, (1863) p. 38, pl. 7 (type locality, Madeira). — Goode and Bean, Oceanic Ichth., (1895) p. 211, (reference).

Taractes princeps Bigelow and Schroeder, Bull. Mus. Comp. Zool., vol. 69, no. 2, p. 45, pl., February 1929 (Browns Bank about 50 miles south west of Cape Sable, Nova Scotia).

Cat 29

Gerres limbatus Cuvier

Gerres limbatus Cuv., Hist. Nat. Poiss., vol. 6, 1830, p. 476. Malabar and Pondicherry.

1/m Bleeker, Verhandel. Batav. Genootsch. (Nalez. Ichth. Bengal.), vol. 25, 1853, p. 38.

1/m Günther, Cat. Fishes Brit. Mus., vol. 4, 1862, p. 259 (Pinang). 1/m Day, Fishes of Malabar, 1865, p. 160 (compiled); Fishes of India, pt. 1, 1875, p. 100 (type; Madras).

1/m Karoli, Termesz. Füzetek, Budapest, vol. 5, 1881, p. 153 (Rangoon). 1/m Day, Fauna British India, vol. 1, 1889, p. 539.

Catochaenum limbatum Cantor, Journ. Asiat. Soc. Bengal, vol. 18, no. 2, 1849, p. 1037 (Pinang).

Brama raschii Esmark, Forhandl. vid. selsk. Christiania, p. 238, pl. 1, 1862 (type locality, ~~Varge Fjord off Alten, Norwegian Lapmark~~, Hammerfest, Norway). — Lunel, Mém. Soc. Phys. Hist. Nat. Genève, vol. 18, p. 181, 1866 (copied).

Argo steindachneri (Döderlein) Steindachner and Döderlein, Denks. Akad. Wiss. Wien, math.-naturw. Kl., vol. 49, (1884), p. 174, (type locality, Tokyo).

Paraclepsis steindachneri Jordan and Snyder, Annot. Zool. Japon., vol. 3, (1901), p. 62, (reference). — Fowler, Occas. Pap. Bishop Mus., vol. 8, no. 7, (1923), p. 378, (Honolulu). — Jordan, Evermann, Tanaka, Proc. California Acad. Sci., ser. 4, vol. 16, no. 2, (1927), p. 654, (Honolulu). — Fowler, Mem. Bishop Mus., vol. 10, (1928), p. 138, pl. 10 fig. 5, (Honolulu example of 1923).

in head, first ray 2 1/8 to 3 1/8; A. III, 6, I, third spine 1 3/4 to 2 1/8, first ray 1 2/3 to 2 1/5; caudal 1 to 1 1/8, forhead; least depth of caudal peduncle 2 1/3 to 2 1/2; ventral 1 1/6 to 1 3/5; pectoral 2 2/5 to 3 in body without caudal.

Back pale brown to olivaceous, sides and below white, all with silvery white sheen. Each row of scales on back, also at least 2 or 3 below lateral line, with slightly darker spot on each scale exposure medially. Iris silvery white. Lips pale. Dorsal membranes darker terminally and each also with dark basal spot, usually just above basal scaly sheath. Fins otherwise all pale.

Madagascar, India, East Indies, Philippines. I cannot find from the original description that Gerres methuoni differs in any important

Depth 2 1/2; head 3 1/4, width 1 3/4. Snout 3 1/2 in head. from snout tip; eye 2 4/5, greater than snout; maxillary reaches nearly back to hind eye edge, expansion 2 1/2? in eye, length 2 in head from snout tip; interorbital 3, well elevated convexly. Gill rakers V, 1 + 8, III, lanceolate, strong, equal gill filaments, which 2 1/3 in eye.

Scales 45 in median lateral series to caudal base; 2 3 transversely; 34 predorsal. Scales crowded and uniformly small on predorsal, breast and head; large on trunk, especially sides, with edge of each gashed or emarginate; small

scales at pectoral base, over caudal basally, also smaller ones on soft dorsal, anal and caudal; axillary ventral scale long as fin; maxillary finely scaled; scales with 3 basal lobes and angular above and below; cheek covered with scales, 16 across widest part to preopercle edge.

D. IV, 28, first branched ray 1 1/3 in total head; A. III, 20, first branched ray 1 7/8; caudal widely forked; least depth of caudal peduncle 4; pectoral rays II, 18, reaches 1 3/4 to caudal base, 1 1/2 in fish without caudal; ventral rays I, 5, fin 1 5/6 in total head.

Deep brown, generally uniform.

Iris dusky. Pectoral and ventral broadly paler marginally.

South Africa, Japan, Hawaii. Also in the Atlantic.

The above description from an example in the B. P. Bishop Museum 608 mm long, obtained July 7, 1906 at Honolulu.

Tarantes saussurii (Lunel)

Brama saussurii Lunel, Mém. Soc. Phys. Hist. Nat. Genève, vol. 18, 1865, p. 185, pl. 2 (type locality, Cuba). — Goode and Bean, Oceanic Ichth., (1895) p. 211, (reference).

added some items from Günther based on Cantor's specimen:

Depth 2 1/2 (without caudal). Snout rather longer than eye, which 3 1/2 in head and equals eye. Preopercle entire. Scales 37 in lateral line, 5 above. Premaxillary groove entirely scaleless. Silvery. Caudal with broad blackish edge (and spinous) dorsal with narrow black edge). Length 92 mm.

depth 2; head 3 2/3, width 2 1/10. Snout 6 1/8 in head from snout tip; eye 3, twice snout; maxillary reaches 3/5 in eye, expansion 2 1/8 in eye, length 2 in head from snout tip; interorbital low in front, very declivous behind. Lower gill rakers 7, tubercular.

Scales 50 in median lateral series to caudal base; 43 transversely; 12 below eye over cheek to preopercle ridge. Vertical fins with membranes all densely covered with minute scales -over- greater portions from base. Lateral line faint, little arched, and nearly parallel with back.

D. IV, 29, first branched ray 1 1/2 in total head length;

Brama haussurii Lunel.

Brama haussurii Lunel, Mém. Soc. Phys. Hist. Nat. Genève, vol. 18, p. 185, pl. 2, 1866 (type locality, Cuba). Goode and Bean, Oceanic Ichth., p. 241, 1895 (reference).

D. III, 19, first branched ray 2 1/10; caudal 1, slightly double concave behind; least depth of caudal peduncle 2 4/5; pectoral 1, reaches vertical of anal origin; rays II, 18, ventral I, 5, fin 2 in total head.

Silvery, deeper on back and front. Dorsal blackish brown, border of front lobe whitish. Anal like dorsal. Caudal blackish medially, upper and lower borders broadly whitish. Paired fins yellowish. Length 330 mm. (Lunel. Cuba). Perhaps not different from Saractes longipinnis.